

Zero Retries issue 0027 2022-01-07

Advanced Amateur Radio - Data Communications; Space; Microwave... the fun stuff! The Universal Purpose of Ham Radio is to have fun messing around with radios. - Bob Witte K0NR; Amateur Radio is literally having a license to experiment with radio technology. - Steve Stroh N8GNJ; Ultimately, amateur radio must prove that it is useful for society. - Dr. Karl Meinzer DJ4ZC; We are confronted by insurmountable opportunities! - Pogo; Nothing great has ever been accomplished without irrational exuberance - Tom Evslin; Irrational exuberance is pretty much the business model of Zero Retries Newsletter - Steve Stroh N8GNJ.

Steve Stroh N8GNJ, Editor

Jack Stroh, Late Night Assistant Editor

In this issue:

- Request to Send
- Zero Retries Lookback on 2021 - Part 2
 - Space
 - AREDN and VARA FM
 - Modernizing Amateur Radio Regulations
 - Something Completely Different
 - Those we lost in 2021
 - Thanks owed
- Feedback Loop
- Coming Attractions
- Contributors This Issue
- Join the *Fun* on Amateur Radio
- Closing The Channel

Happy 2022, Zero Retries Subscribers!

Request to Send

Zero Retries Lookback on 2021 - Part 2

The Zero Retries Lookback on 2021 became too long to email, so it became a two-parter. Part 1 was published in Zero Retries 0026 published 2021-12-31.

Space is one of the recurring themes of Zero Retries. I plan to get active in Amateur Radio space communications, and would love to say I'll get a space system set up in 2022, but there are enough high priority projects ahead of "space" that I don't want to list it as a goal and not get it done. Here are some articles about space in Zero Retries in 2021.

- **Amateur Radio in Orbit - OSCAR 0** - ZR 0003. Explains a bit about Earth-Moon-Earth (aka Moonbounce) communications.
 - **Exploring the Idea of a Geostationary Amateur Radio Satellite for the Western Hemisphere** - ZR 0012. This landed with resounding silence; I think we can consider the radical concept I outlined in that article to be a total non-starter.
 - **5 brief stories about satellites** - ZR 0021.
 - **World's Smallest Moon Lander from Japan will Put Ham Radio Transmitter on the Moon** - ZR 0025. Having an Amateur Radio presence on Luna will be a bragging point and working it will be a cool technical challenge.
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There were some topics that I felt strongly enough to write extensively about:

- **AREDN** - AREDN is a highly useful technology for Amateur Radio.
 - **AREDN Updates (extracted from Facebook)** - ZR 0021
 - **VARA FM** - VARA FM is as good a radio technology (using existing, conventional FM radios with "flat audio" connections for data) as ever has existed. I wrote about VARA FM in **VARA FM Deep Dive Part 1** - ZR 0004 and **VARA FM Deep Dive Part 2** - ZR 0006.
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Modernizing Amateur Radio Regulations If Amateur Radio is to survive with meaningful allocations of spectrum (at least in the US, where pressure from the mobile communications lobby is intense), not only are more Amateur Radio operators needed for higher representation, but the Amateur Radio regulations by the Federal Communications Commission (FCC) have to be modernized. I didn't write about this as much as I intended because there was so much else to write about, and doing so requires intense research to state things about regulatory reform that are grounded in fact, not just emotion and opinion. I'll do a better job of this in 2022. I did write about regulatory reform a bit, with some significant help.

- **Modernizing Amateur Radio Regulations** - ZR 0005.
-

Something Completely Different There were a couple of “just because” articles that had nothing to do with Amateur Radio:

- **Unfair Advantage - the CoCo Lives** - ZR 0005.
 - **65” Monitor** - ZR 0019. *That* changed my life, and made writing Zero Retries much, much easier. I continue to love it!
-

Those we lost in 2021 There were ~~two~~ three significant Silent Keyboards of note relating to Zero Retries areas of interest in 2021. *Update 2022-01-09 - When this issue was emailed, I missed the (sad) inclusion on this list of Dale Heatherington WA4DSY - see below.*

- [Dale Heatherington WA4DSY](#) was famous to those of us who aspired to “Advanced Data Communications” in Amateur Radio. WA4DSY created a [56 kbps radio frequency modem](#) that worked and was usable by mere mortals... if a bit expensive at the time. Just add a 28 MHz to 144 / 222 / 440 MHz transverter. WA4DSY’s “other” claim to fame was the co-founder of Hayes Microcomputer Products (Hayes dialup modems).
 - [Glynn “Buck” Rogers K4ABT](#) was a prolific columnist and author about Packet Radio with CQ Magazine. Both K3IO and K4ABT made unique dents in the universe, and they will be missed. It’s one of my long-term projects to extract all the “Digital” content from my (print) collection of CQ archives and have it readily available for reference.
 - [Tom Clark K3IO](#) (perhaps better known by his former callsign of W3IWI). I was aware of W3IWI’s many contributions to Amateur Radio in Space and AMSAT-NA, but until I read his Amateur Radio obituaries, I was only vaguely aware of his early influence on TAPR and Packet Radio.
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Thanks owed The list of Thank Yous owed for Zero Retries is long.

- My wife Tina KD7WSF, for everything, and especially patience as I’ve devoted major blocks of time in 2021 to Zero Retries. KD7WSF is unfailingly encouraging about Zero Retries.
- Old debts that led to Zero Retries - I owe Maynard Weston W8MW (SK) a debt for his encouragement during my first years of being an Amateur Radio Operator and guiding me to kindred spirits in the Cleveland, Ohio area that were also interested in Packet Radio. I owe Greg Jones WD5IVD (SK) a great debt for encouraging me to write about Packet Radio, including a brief stint as Editor of TAPR’s Packet Status Register, and then other articles about Packet Radio through the years. My friend Dewayne Hendricks WA8DZP changed my life one evening in 1996 at a Kinko’s store in the Seattle area with tales about license-exempt wireless devices that I couldn’t believe. Researching what WA8DZP told me about (attempting to prove to myself that what he told me wasn’t accurate because “I knew better”) eventually led me down a path that forked my career

into independent writing.

- I owe Thanks to my friends Bill Vodall W7NWP (Zero Retries Instigator in Chief) and Larry Gadallah NM7A for their encouragement over the... decade... (that's still hard to write) that Zero Retries was in gestation.
- I owe Thanks to Zero Retries "pseudostaffers" [Dan Romanchik KB6NU](#), [Jeff Davis KE9V](#), and [Steve Lampereur KB9MWR](#). All three not only surface interesting things on their respective blogs that I otherwise would miss, but they've offered ongoing encouragement especially in the early days of Zero Retries. Thanks guys!
- I owe Thanks to three subscribers who offered frequent (and very much appreciated!) feedback on Zero Retries. I don't get much feedback on Zero Retries so their regular feedback has outsized influence.
 - **Martin Rothfield W6MRR** - we've exchanged many emails on topics inspired by Zero Retries articles.
 - **Greg Hancock AE7EL** - offered many constructive comments on RAMA. I look forward to meeting AE7EL "in real life" one of these days as he lives nearby on Orcas Island, Washington.
 - **"I'd rather not be quoted or named"** was an early Zero Retries subscriber and provides regular feedback via private emails.
- I owe Thanks to my daughter Merideth who became an Amateur Radio Operator in 2021! She is now, proudly, KK7BKI and I look forward to doing Amateur Radio projects with her in the coming months and years, and she reads Zero Retries regularly. It doesn't get better than that.
- I also owe Thanks to the [Substack email newsletter platform](#). It was the primary enabling factor to create Zero Retries with minimal friction. There are other subscription email newsletter platforms, but in my opinion, Substack is the most evolved of all of them. It works well, has been entirely reliable, and constantly improved. If you want to do a newsletter like Zero Retries, even if you don't plan to charge subscriptions, I recommend Substack. Every month there's some new, nicer features added because Substack really listens to feedback from the authors using their platform. Substack is one of those rare virtuous feedback loops in business - Substack only makes revenue if the authors using their platform make revenue.
- And, of course, the 200+ of you Zero Retries subscribers! Without you, Zero Retries... just wouldn't be... certainly not worth continuing past 25 issues.

Feedback Loop

- (Empty buffer)
-

Coming Attractions

I'll use this section to mention upcoming events and ideas I'm working on for Zero Retries.

- **External Project** In January, I'll be working on an external project for an organization that I'm not sure if I'm at liberty to disclose. I was honored to be asked to help on this project, and it will consume a lot of my available time in January. I don't expect Zero Retries to be impacted.
 - **Hamcation 2022** [Hamcation](#), held in Orlando, Florida 2022-02-11 through 13 seems to be a go. Hamcation is one of the largest US Amateur Radio conferences.
 - **Zero Retries 0028** on 2022-01-14 will include "Unfinished business" from 2021, and a look ahead at Zero Retries plans for 2022.
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Contributors This Issue

- My ongoing Thanks to Tina Stroh KD7WSF for, well, *everything*, Bill Vodall W7NWP as *Zero Retries Instigator in Chief*, and Larry Gadallah NM7A for his long term encouragement about Zero Retries.
 - My ongoing Thanks to pseudostaffers [Dan Romanchik KB6NU](#), [Jeff Davis KE9V](#), and [Steve Lampereur KB9MWR](#) for continuing to spot, and write about "Zero Retries Interesting" type items, on their respective blogs, from Amateur Radio and beyond, that I don't spot on my own.
 - For those that get the reference, [Southgate Amateur Radio News](#) is, to me, the "[Slashdot](#)" of Amateur Radio, and I follow them both on Twitter and their RSS feed. They consistently surface "Zero Retries Interesting" stories.
-

Join the *Fun* on Amateur Radio

If you're not yet licensed as an Amateur Radio Operator, and would like to join the fun by *literally having a license to experiment with radio technology*, here are some pointers:

- **Ham Radio for Dummies** by Ward Silver N0AX is a great overview of Amateur Radio. N0AX is a gifted writer and HRFD is now in its [4th edition](#).
- My two favorite **YouTube** channels for a good overview of Amateur Radio are [AmateurLogic.TV](#). and [Ham Nation](#) (part of Ham Radio Crash Course). These folks just seem to have so much fun!
- Dan Romanchik KB6NU offers a free **No-Nonsense Study Guide** for the [Technician test](#) (PDF).
- [HamExam.org Amateur Radio Practice Exams](#) offers good **Flash Card and Practice**

Exams.

- When you're ready to take an **Amateur Radio examination** (Tech, General, or Extra), W1MX - The MIT Amateur Radio Society offers [remote exams](#), free for students and youngsters. *There are apparently [many other remote exam options](#).*

Bonus - with an Amateur Radio license, you'll be [more attractive on dates](#) 😊

Closing the Channel

Zero Retries is on Twitter @zero retries - just click:

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Email issues of Zero Retries are “instrumented” by [Substack](#) to gather basic statistics about opens, clicking links, etc. I don't use such information in any way other than (in the absence of much feedback) getting some satisfaction that the data shows that people actually do read Zero Retries.

All previous issues of Zero Retries are available without restriction (no paywalls). For some background on Zero Retries 0000 was the **Introduction Issue**. Zero Retries 0026 and Zero Retries 0027 were a **2021 Year End Review** of Zero Retries.

More bits from Steve Stroh N8GNJ:

- [SuperPacket blog](#) - *Discussing new generations of Amateur Radio Data Communications - beyond Packet Radio (a precursor to Zero Retries)*
- [N8GNJ blog](#) - *Amateur Radio Station N8GNJ and the mad science experiments at N8GNJ Labs - Bellingham, Washington, USA*

Thanks for reading!

Steve Stroh N8GNJ
Bellingham, Washington, USA
2022-01-07

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Below is a much more complete "footer" that has evolved over 30+ issues of ZR.

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- [Radio Amateur Training Planning and Activities Committee \(RATPAC\)](#) offers weekly presentations on general Amateur Radio topics (Wednesdays) and emergency communications in Amateur Radio (Thursdays).
- Dan Romanchik KB6NU offers a free **No-Nonsense Study Guide** for the [Technician test](#) (PDF).
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Closing the Channel

- In its mission to grow Amateur Radio and make it more relevant to society in the 2020s and beyond, Zero Retries is published via email and web, and is available to anyone at no

cost. Zero Retries is proud *not to participate* in the Amateur Radio Publishing Industrial Complex!

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- The [Substack email publishing platform](#) makes Zero Retries possible. I recommend it for publishing newsletters.

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Thanks for reading!

Steve Stroh N8GNJ (He / Him)

These bits were handcrafted in beautiful Bellingham, Washington, USA

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